Audio Podcast Script
TIF Challenges in Education Information Systems and Knowledge Management
Chris Thorn, Sara Kraemer, and Jeff Watson

Interviewer: Welcome to the TIF TIPS podcast series. I'm Tamara Azar with the Center for Educator Compensation Reform and I'm joined by presenter Jeff Watson with the Wisconsin Center for Education Research.

Jeff: Thanks for having me.

Interviewer: Jeff, TIF grantees face a number of challenges in developing information systems that are robust enough to support their program, data and reporting needs. You provide technical assistance to grantees as they work through some of these challenges and you are presenting a session at the annual conference on some of the challenges in Education Information Systems and Knowledge Management. Can you start off by telling me what makes quality data and then talk a little about some of the challenges to success that grantees face?

Jeff: We like to think that quality data has at least seven characteristics. First, it is accurate and valid. It will be granular, integrated and relational. It will be reducible, and most importantly it will be actionable. Accuracy is self-explanatory, but it is a critical component. Is the data right? This is very important to all the TIF grantees. The data needs to be granular in that it needs to be detailed enough to provide the right information. Valid data needs to represent the reality of what is going on in schools. When you designed your TIF grant most likely you were creating categories of teachers, and those categories may or may not map on to the reality of the school depending on how the school is designed. Integrated data means that data from multiple systems can be connected together, and that's connected to the notion of relational. Relational data is defined as data that is organized in a way that allows you to be flexible when you query that data. Reducible data just means that you should be able to drill down into meaningful categories, such as: who is a math teacher? who is a science teacher? who is a reading teacher? who is teaching second grade? who is teaching sixth grade? And finally, the data should be actionable. Data consumers will want to know what to do.

Interviewer: In the information systems session you share some nice examples of the complicated nature of designing systems that can link students with teachers and with classifying teachers into categories. When a program needs to classify a teacher, what are some of the issues they might run into?

Jeff: That's a really good question. It can be complicated to classify a teacher. The things that you need to think about are: who is teaching across grades? who is teaching multiple content areas? Depending on the district, this could be a significant number of teachers. You should consider teachers who especially are teaching both math and science, since those content areas sometimes or by design overlap, and which teachers teach more than one grade or split-grade classrooms, which may be more common. A major challenge is deciding what a course is—what is a math course? what is a reading course? Depending on the size of the district and the number of courses that exist in the course catalog, this can be a fairly daunting task. As you complete

this work, your goal should be to create a data set that's valid, that maps onto the reality of schools, and that's reliable. Also, it's a good idea to look at your student information system data rather than the human resource data. Keep in mind that what your HR system tells you about where a teacher is certified may not be where the teacher is actually teaching. Therefore, it's a good idea to pull the data from the student information system that will give you the exact or the real data about what courses the teachers are teaching rather than what they are qualified to teach or certified to teach. This will help you improve both accuracy and validity. The SIS will also give you a view into who is teaching split classroom and teaching across grades. If a teacher must be categorized into a single grade or content area, then you could look at the number of students that teacher is teaching in each of those grades or content areas, and just simply go with whichever has the most students.

Interviewer: Can you summarize the important messages that you would like someone to take away from your session?

Jeff: Data quality is a really critical issue for most, if not all TIF grantees and each TIF project has unique IT challenges, needs and priorities. Data quality has several components and these characteristics help us understand what to do in addressing the data quality needs of a project. Also, improving data quality has both short-and long-term solutions. Finally, the priorities that a project sets should reflect the constraints, priorities and theories of action for their particular circumstances.

Interviewer: Jeff, thanks for joining me today. CECR has a developed some helpful resources around information systems and data quality. Jeff Watson has written two modules the *Guide to Implementation* series: The first is *Data Quality Issues*. The other that he co-authored with Bob Glover and Chris Thorn is *Information Technology Considerations*. All of the *Guide* modules can be found on the CECR website under Resources. Also, you can find the complete presentation "TIF Challenges in Education Information Systems and Knowledge Management" on the website under Events.

This is Tamara Azar for CECR.